
Superfund



SUPPLEMENTAL GUIDANCE FOR DEVELOPING SOIL SCREENING LEVELS FOR SUPERFUND SITES

Peer Review Draft



- **Informational Devices.** Informational tools provide information or notification that residual or capped contamination may remain on site. Common examples include state registries of contaminated properties, deed notices, and advisories. Because such devices are not legally enforceable, it is important to carefully consider the objective of this category of IC. Informational devices are most likely to be used as a secondary "layer" to help ensure the overall reliability of other ICs.

Early and careful consideration of ICs can be valuable for soil screening evaluations because it focuses attention on land use assumptions that can be maintained over time. In the context of soil screening analyses, the IC evaluation should identify the types of ICs available, the existence of the authority necessary to implement an IC, the willingness and ability of the appropriate entity to effectively implement and enforce the IC in both the short and long term, and the relative cost associated with the implementation and maintenance of any IC. Incorporating such considerations as a part of the screening assessment allows site managers to anticipate and consider potential barriers to the implementation of ICs.

In addition, early consideration of IC options assists site managers in identifying those parties (e.g., local government agencies) who would be instrumental in ensuring the effective implementation and management of any IC selected. For example, a local government's ability to effectively maintain or enforce an IC may affect not only the type of IC selected, but also the decision of whether it is appropriate to utilize ICs to help achieve protection of human health. Consideration of IC options is thus a valuable tool for increasing the overall reliability of screening decisions and should not be viewed as an afterthought to the soil screening process.

For more detailed information on how to evaluate and implement ICs, please consult the following publications:

Institutional Controls: A Site Manager's Guide to Identifying, Evaluating and Selecting Institutional Controls at Superfund and RCRA Corrective Action Cleanups. Office of Solid Waste and Emergency Response. EPA 540-F-00. OSWER 9355-0-24-FS-P. September 2000.

Land Use in the Remedy Selection Process. OSWER Directive No. 9355.7-04. May 1995.

4.3.3 Applicability of OSHA Standards at NPL Sites

Conducting soil screening evaluations at sites where workers are the primary receptors of concern raises questions about the roles of commercial/industrial SSLs and OSHA standards in protecting these receptors. Although both OSHA standards and SSLs protect the health of workers

exposed to toxic substances, the conditions of exposure implicit in each set of values differ. As a result, OSHA standards are not suitable substitutes for SSLs.

The key distinctions between OSHA standards and commercial/industrial SSLs include the underlying assumptions about the context of workplace exposures, the characteristics of the workers being protected, and the level of protection afforded to workers (U.S. EPA, 1995b).

- **Context of Workplace Exposure.** OSHA standards assume that workers are exposed to hazardous chemicals used in or generated as a result of routine work activities. These workers are assumed to be aware of the chemicals to which they are exposed and can obtain information on them through Right-to-Know laws. Further, they tacitly accept certain risks associated with exposure because they receive a benefit (i.e., higher wages) to compensate them for additional hazard. On the other hand, commercial/industrial SSLs address worker exposures to general environmental pollution — contaminants whose presence at a site may be independent of any current or future work activity (though work activities, such as excavation, may lead to exposure).
- **Characteristics of Worker Receptors.** OSHA standards protect workers who are likely, through self-selection, to be less sensitive to the chemicals to which they are exposed; a worker who finds that he or she is highly sensitive to a compound that is used during daily work activities would be able to proactively seek other jobs or alternative job responsibilities that do not involve exposure to that compound. Thus, unlike SSLs, which are based on an RME scenario, OSHA standards are not designed to protect against exposures to sensitive sub-populations (e.g., children).
- **Level of Protection Afforded to Workers.** OSHA standards assume not only that workers are knowingly exposed to specific chemicals in the workplace, but also that they receive additional protection and training to mitigate exposures. OSHA requires workers to be trained to control or prevent exceedances of its exposure standards (including the use of personal protective clothing and gear to help prevent excessive exposures). OSHA also requires periodic worker health monitoring to ensure that excessive exposures are not occurring. In contrast, *RAGS Part A* (U.S. EPA, 1989b) indicates that a Superfund risk assessment is an analysis of potential adverse health effects (current or future) caused by hazardous substances released from a site *in the absence of any actions or controls to mitigate exposures*.